

# STATEMENT OF BASIS for PASSAIC VALLEY SEWERAGE COMMISSIONERS

## TITLE V OPERATING PERMIT SIGNIFICANT MODIFICATION

Program Interest (PI): 07349 / Permit Activity Number: BOP230003

### I. FACILITY INFORMATION

Passaic Valley Sewerage Commissioners (PVSC) is located at 600 Wilson Avenue, Newark, New Jersey 07105 in Essex County. PVSC consists of a wastewater treatment plant and is a publicly owned and operated facility.

The facility is classified as a major facility based on its potential to emit 76.8 tons per year of volatile organic compounds (VOC), 64.4 tons per year of oxides of nitrogen (NOx) and 103 tons per year of carbon monoxide (CO) to the atmosphere.

This permit allows individual hazardous air pollutant to be emitted at a rate to not exceed 600 pounds per year of Acetaldehyde, 80 pounds per year of Acrylonitrile, 500 pounds per year of Formaldehyde, 780 pounds per year of Benzene, 5,040 pounds per year of Dichlorobenzene, 8,840 pounds per year of Chloroform, 824 pounds per year of 1,3- Butadiene, 3,680 pounds per year of Ethylene Dichloride, 2,740 pounds per year of Styrene, 2,120 pounds per year of Hydrogen Chloride, 200 pounds per year of Vinyl Acetate, 152 pounds per year of 1,1,2,2-Tetrachloroethane, 80 pounds per year of Acrylonitrile, 102 pounds per year of Phenol, and 5,680 pounds per year of Xylene.

Total HAPs emissions from insignificant sources and/or non-source fugitives are estimated values and are not speciated.

### II. AREA ATTAINMENT CLASSIFICATION

The Federal Clean Air Act (CAA) sets National Ambient Air Quality Standards (NAAQS) for six common air pollutants. These commonly found air pollutants (also known as "criteria pollutants") are particulate matter, ground-level ozone, carbon monoxide (CO), sulfur dioxide (SO<sub>2</sub>), nitrogen dioxide (NO<sub>2</sub>), and lead. The US Environmental Protection Agency (USEPA) also classifies areas as "attainment" or "nonattainment" for each criteria pollutant, based on the magnitude of an area's problem. Nonattainment classifications are used to specify what air pollution reduction measures an area must adopt, and when the area must reach attainment. Currently, the entire State of New Jersey is designated as nonattainment for the 8-hour ozone NAAQS. New Jersey is designated attainment for all other pollutants. For nonattainment classification refer to <https://www.epa.gov/green-book/green-book-national-area-and-county-level-multi-pollutant-information>.

### III. BACKGROUND AND HISTORY

The equipment that emits air contaminants from this facility include: 15 boilers and hot water heaters; sewerage processing, dewatering, and odor control equipment; bulk solids material handling and storage equipment; 2 gasoline tanks; and a paint spray booth. There are 15 control devices. Filters and scrubbers reduce particulate emissions by 99% or more. Scrubbers and thermal oxidizers reduce VOC emissions by 98% or more. Scrubbers reduce hydrogen sulfide and ammonia by 99% or more. Thermal oxidizers reduce carbon monoxide by 98% or more.

A Facility-Wide Risk Assessment will be conducted during the next Operating Permit Renewal process. Health Risk Assessment was not conducted with this permit modification since no changes were made to Air Toxics (including HAPs) emissions.

This is a Permit Modification and includes the following changes:

- delete Equipment E14 and E15 (old USTs, 10,000 gallon each)
- delete Emission Points PT9 and PT10 (old UST vent pipes)
- add Equipment E207 (10,000 gallon gasoline UST) and E208 (6,000 gallon gasoline UST)
- add Emission Points PT207 and PT208
- decrease in VOC emissions from 0.68 tpy to 0.3 tpy for U9 OS Summary
- remove outdated sulfur content limits in IS1, IS2, IS3, and U102 OS Summary

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This modification will also change the facility-wide emission limits as listed in the following table:

| Allowable Emission Limits | Facility's Potential Emissions (tons per year)* |                 |     |                 |             |                          |                           |    |              |                          |
|---------------------------|---|-----------------|-----|-----------------|-------------|--------------------------|---------------------------|----|--------------|--------------------------|
|                           | VOC (total)                                     | NO <sub>x</sub> | CO  | SO <sub>2</sub> | TSP (total) | PM <sub>10</sub> (total) | PM <sub>2.5</sub> (total) | Pb | HAPs (total) | CO <sub>2e</sub> (total) |
| Current Permit            | 77.2  | 64.4            | 103 | 24.9            | 14          | 15                       | NA                        | NA | 15.7         | 287,000                  |
| Proposed Permit           | 76.8  | 64.4            | 103 | 24.9            | 14          | 15                       | NA                        | NA | 15.7         | 287,000                  |
| Change (+ / -)            | -0.4  | 0               | 0   | 0               | 0           | 0                        | 0                         | 0  | 0            | 0                        |

VOC Volatile Organic Compounds

NO<sub>x</sub> Nitrogen Oxides

CO Carbon Monoxide

SO<sub>2</sub> Sulfur Dioxide

TSP Total Suspended Particulates

\* Other Any other air contaminant regulated under the Federal Clean Air Act.

This permit does not contain any air pollutants under this category.

PM<sub>10</sub>

PM<sub>2.5</sub>

Pb

HAPs

CO<sub>2e</sub>

Particulates under 10 microns

Particulates under 2.5 microns

Lead

Hazardous Air Pollutants

Carbon Dioxide equivalent

There are no proposed changes to air contaminant allowable emission rates.

## IV. CASE-BY-CASE DETERMINATIONS

No case-by-case determinations were required for this modification.

## V. EMISSION OFFSET REQUIREMENTS

This modification is not subject to Emission Offset requirements.

## VI. BASIS FOR MONITORING AND RECORDKEEPING REQUIREMENTS

The facility's operating permit includes monitoring, recordkeeping and reporting requirements that are sufficient to demonstrate the facility's continued compliance with the applicable requirements consistent with the following:

- Provisions to implement the testing and monitoring requirements of N.J.A.C. 7:27-22.18, the recordkeeping and reporting requirements of N.J.A.C. 7:27-22.19, and all emissions monitoring and analysis procedures or compliance assurance methods required under the applicable requirements, including any procedures and methods promulgated pursuant to 40 CFR 64; and
- Where the applicable requirement does not require direct periodic monitoring of emissions, the Department requires periodic monitoring of surrogate parameters sufficient to yield reliable data from the relevant time period that are representative of the facility's compliance with the permit.

For underground storage tanks E207 and E208, the facility monitors the total throughput (gal/month and gal/yr) and gasoline vapor pressure as surrogates for the long-term (TPY) emission limits for VOC.

- In some cases, direct periodic monitoring of emissions and/or surrogate parameters is not required due to one or more of the following:
  - Equipment size and capacity limitations,
  - Subject equipment being permitted at the maximum rated capacity,
  - There is no specific state or Federal standard that applies to this piece of equipment,
  - Not a pollutant of concern for this piece of equipment,
  - Agreements with EPA on the frequency of testing and monitoring for combustion sources.

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#### **VII. APPLICABLE STATE AND FEDERAL RULES**

This modification is subject to New Jersey Air Pollution Control Regulations, codified in N.J.A.C. 7:27-1 through 34, as applicable. A complete text of these regulations is available at:

<http://www.nj.gov/dep/aqm/rules27.html>

This modification is also subject to the Federal regulations listed below.

MACT Subpart A: General Provisions

MACT Subpart CCCCCC: Gasoline Dispensing Facilities

The Greenhouse Gas (GHG) emissions from this facility are 287,000 TPY CO<sub>2</sub>e and there is no increase of GHG emissions. This modification is not subject to PSD rules at 40 CFR 52.21.

#### **VIII. FACILITY'S COMPLIANCE STATUS**

The Responsible Official at the facility has certified that the facility currently meets all applicable requirements of the Federal Clean Air Act and the New Jersey Air Pollution Control Act. Based on this certification, the Department's evaluation of the information included in the facility's application, and a review of the facility's compliance status, the Department has concluded that this air pollution control operating permit should be approved.

This operating permit includes a permit shield, pursuant to the provisions of N.J.A.C. 7:27-22.17. A permit shield provides that compliance with the relevant conditions of the operating permit shall be deemed compliance with the specific applicable requirements that are in effect on the date of issuance of the draft operating permit, and which form the basis for the conditions in the operating permit.

Prior to the expiration of the Operating Permit's five-year term, the facility will be required to apply for a renewal, at which time the Department will evaluate the facility and issue a public notice with its findings.

#### **IX. EXEMPT ACTIVITIES**

The facility's operating permit does not include exempt activities such as office and interior maintenance activities, maintenance shop activities, food preparation facilities, cafeterias and dining rooms, etc. A complete list of exempt activities, as allowed by the Operating Permit rule, can be found at N.J.A.C. 7:27-22.1.

FACILITY NAME (FACILITY ID NUMBER)  
BOP050001

Activity Number assigned  
by the Department

### New Jersey Department of Environmental Protection Facility Specific Requirements

Emission Unit Number  
assigned by the Facility

Brief description of  
emission unit

**Emission Unit:** U40 Sewage Sludge Incinerators  
**Operating Scenario:** OS Summary

OR

**OS2 Fluidized Bed Incinerator**

OS Summary lists all rules and requirements that apply to an emission unit. An emission unit may contain one or more pieces of equipment and corresponding operating scenarios.

OSX denotes the operating scenario number and lists the rules and requirements that apply to a scenario. An operating scenario represents various ways (or scenarios) a piece of equipment is permitted to operate.

Item  
Number

Description of applicable  
requirement

Monitoring method to  
ensure compliance

Recordkeeping to show  
facility's compliance

Actions and submittals  
required for the facility

| Ref.# | Applicable Requirement  | Monitoring Requirement   | Recordkeeping Requirement  | Submittal/Action Requirement   |
|-------|---|--|--|--|
| 3     | The permittee shall conduct an annual performance test for each pollutant in Table 2 of 40CFR62 Subpart LLL between 11 and 13 calendar months after the previous performance test or within 60 days of a process change. [40 CFR 62.16000(a)] | Other: Conduct the performance test using the test methods, averaging methods and minimum sampling volumes or durations as specified in 40CFR62 Subpart LLL and according to the testing, monitoring and calibration requirements specified in 40 CFR 62.16015(a). [40 CFR 62.16000(a)]. | Other: (1) Maintain records of the results of initial, annual and any subsequent performance tests conducted to determine compliance with the emission limits and standards and/or to establish operating limits, as applicable. [40 CFR 62.16025(e)]. | Submit a report: Annually to the Administrator and to the Department. The permittee shall submit an annual compliance report as specified in 40 CFR 62. [40 CFR 62.16000(d)] |

Rule citation for  
applicable requirement

Rule citation for  
monitoring requirement

Rule citation for  
recordkeeping requirement

Rule citation for submittal/  
action requirement

### Explanation Sheet for Facility Specific Requirements